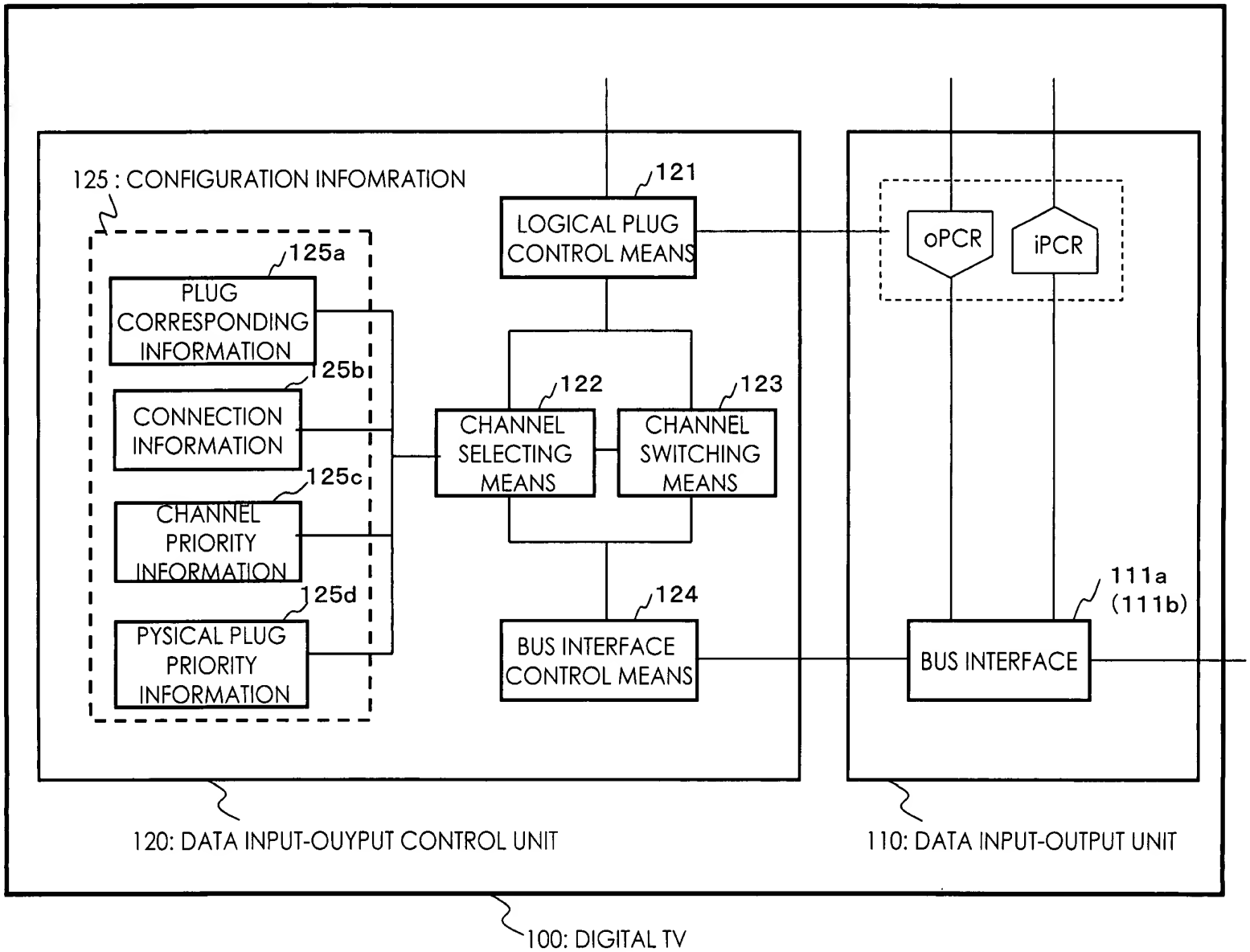
Fig. 1


125 : CONFIGURATION INFOMRATION
125a
PLUG CORRESPONDING INFORMATION
125b
CONNECTION INFORMATION
125c
CHANNEL PRIORITY INFORMATION
125d
PYSICAL PLUG PRIORITY INFORMATION
121
LOGICAL PLUG CONTROL MEANS
122
CHANNEL SELECTING MEANS
123
CHANNEL SWITCHING MEANS
124
BUS INTERFACE CONTROL MEANS
oPCR
iPCR
111a (111b)
BUS INTERFACE
1394bus
120: DATA INPUT-OUYPUT CONTROL UNIT
110: DATA INPUT-OUTPUT UNIT
100: DIGITAL TV

TOHKU 1025260

Fig. 2

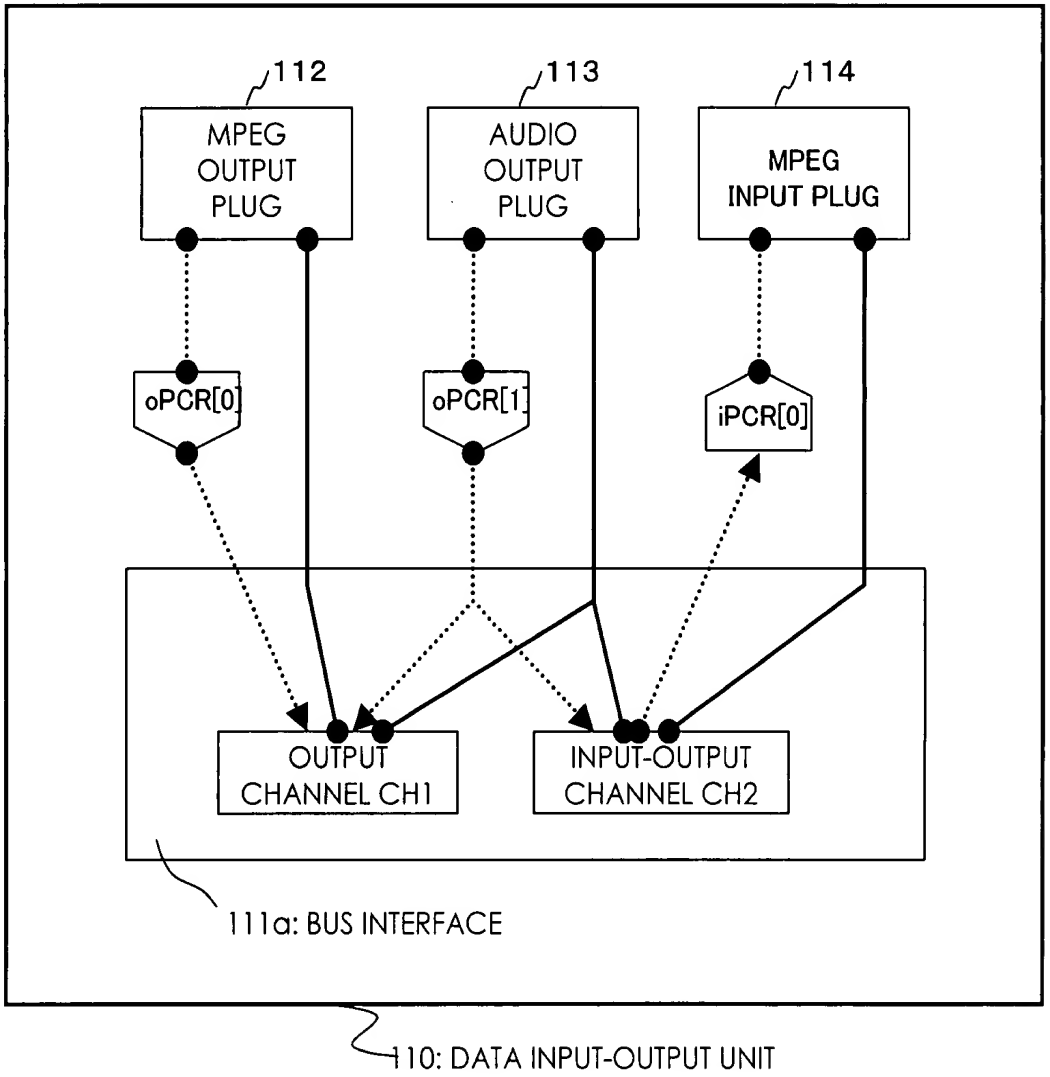


Fig. 3

	MPEG OUTPUT	AUDIO OUTPUT	MPEG INPUT
CHANNEL	CH1		
		CH1	
		CH2	
			CH2
	CH1		CH2
	CH1	CH2	
		CH1	CH2

Fig. 4

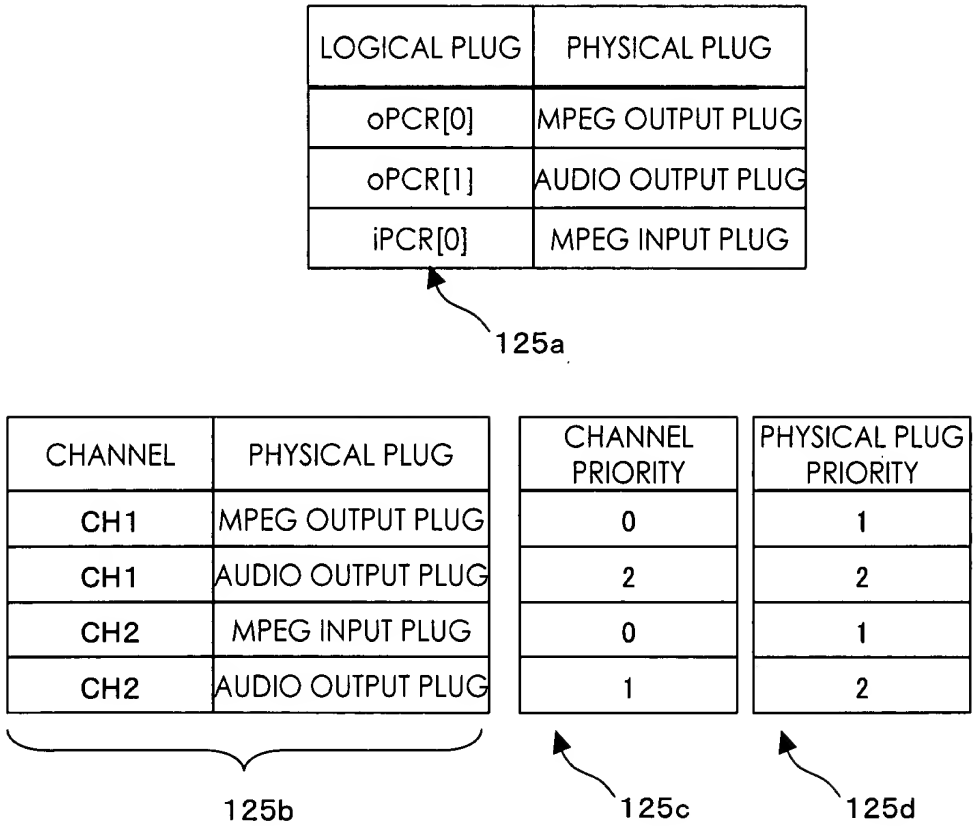

LOGICAL PLUG
PHYSICAL PLUG
oPCR[0]
MPEG OUTPUT PLUG
oPCR[1]
AUDIO OUTPUT PLUG
iPCR[0]
MPEG INPUT PLUG
125a
CHANNEL
PHYSICAL PLUG
CH1
MPEG OUTPUT PLUG
CH1
AUDIO OUTPUT PLUG
CH2
MPEG INPUT PLUG
CH2
AUDIO OUTPUT PLUG
CHANNEL PRIORITY
0
2
0
1
PHYSICAL PLUG PRIORITY
1
2
1
2
125b
125c
125d

Fig. 5

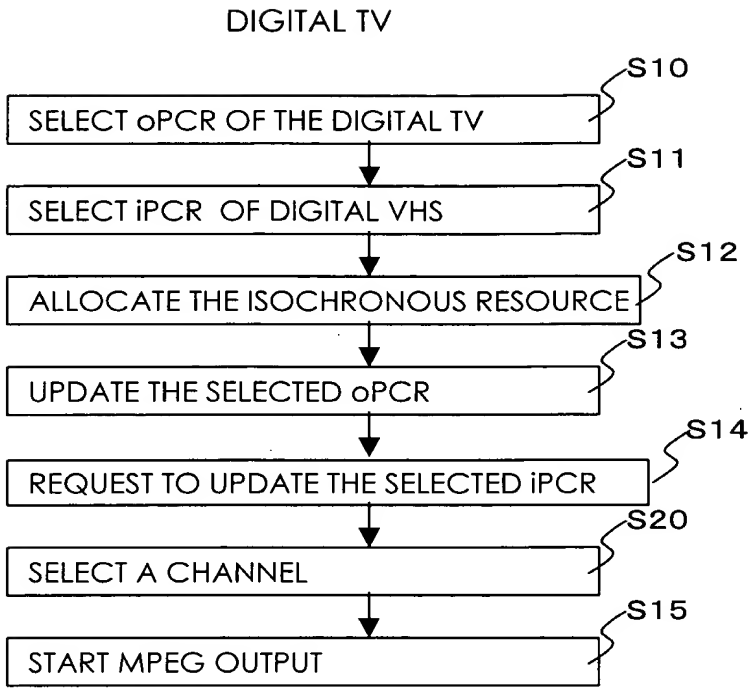

DIGITAL TV
S10
SELECT oPCR OF THE DIGITAL TV
S11
SELECT iPCR OF DIGITAL VHS
S12
ALLOCATE THE ISOCHRONOUS RESOURCE
S13
UPDATE THE SELECTED oPCR
S14
REQUEST TO UPDATE THE SELECTED iPCR
S20
SELECT A CHANNEL
S15
START MPEG OUTPUT

Fig. 6

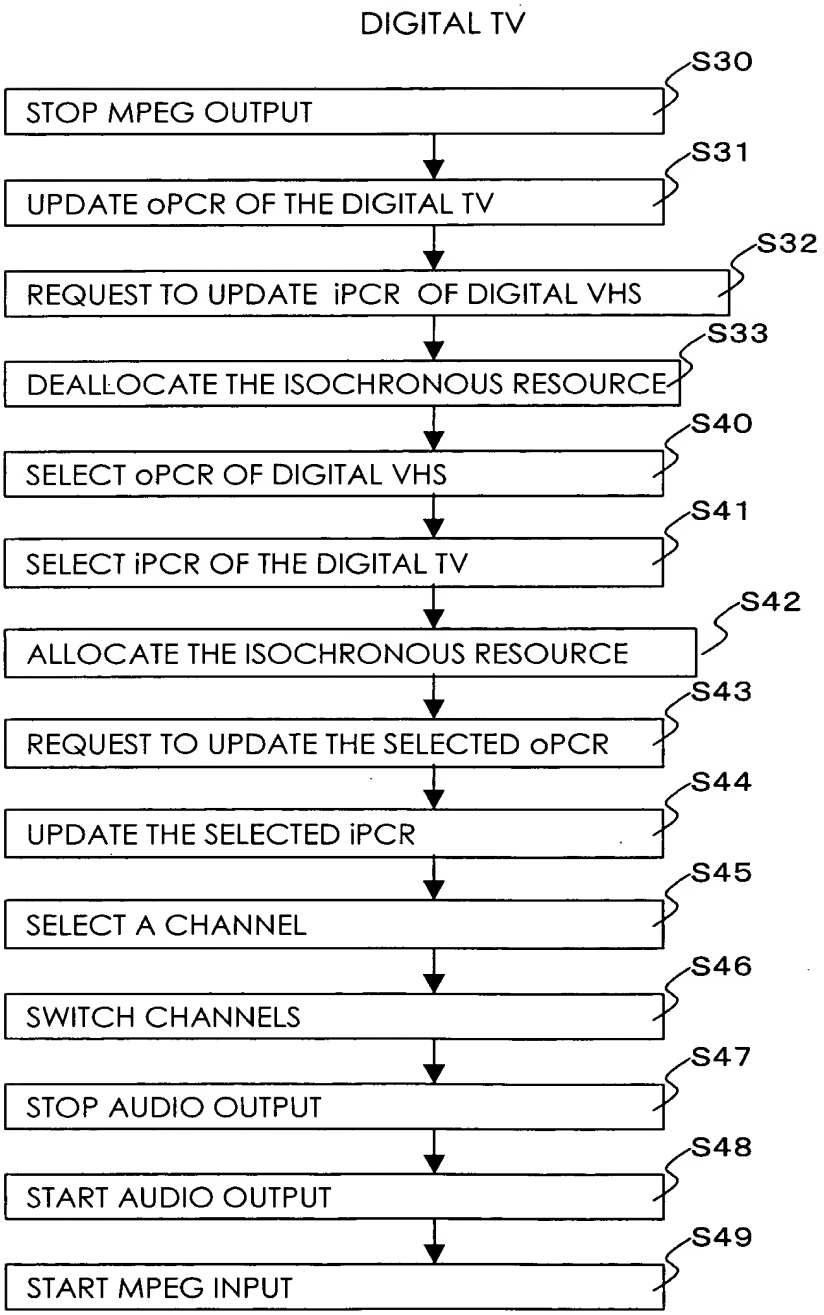

DIGITAL TV
S30
STOP MPEG OUTPUT
S31
UPDATE oPCR OF THE DIGITAL TV
S32
REQUEST TO UPDATE iPCR OF DIGITAL VHS
S33
DEALLOCATE THE ISOCHRONOUS RESOURCE
S40
SELECT oPCR OF DIGITAL VHS
S41
SELECT iPCR OF THE DIGITAL TV
S42
ALLOCATE THE ISOCHRONOUS RESOURCE
S43
REQUEST TO UPDATE THE SELECTED oPCR
S44
UPDATE THE SELECTED iPCR
S45
SELECT A CHANNEL
S46
SWITCH CHANNELS
S47
STOP AUDIO OUTPUT
S48
START AUDIO OUTPUT
S49
START MPEG INPUT

Fig. 7

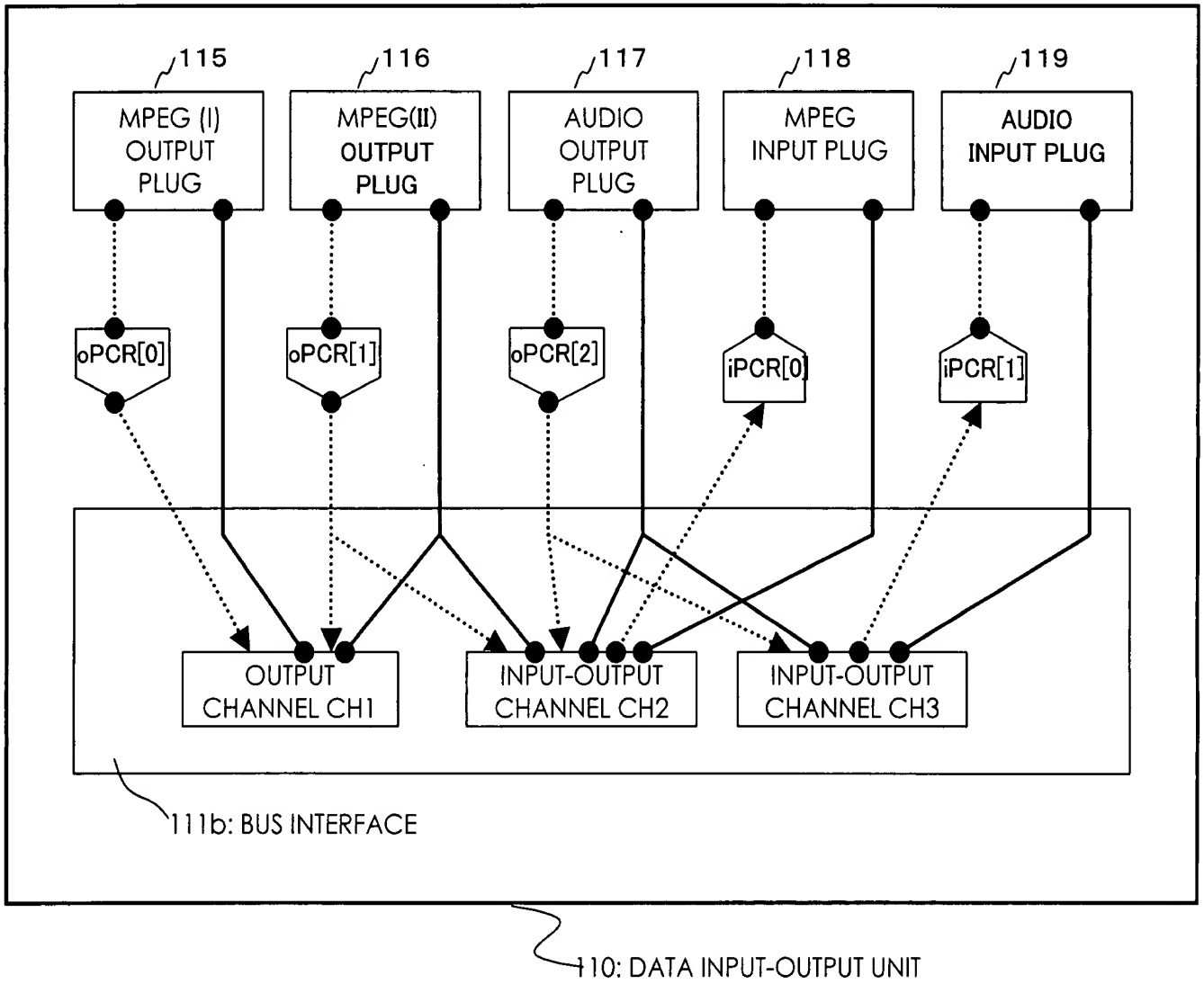

115
116
117
118
119
MPEG (I) OUTPUT PLUG
MPEG(II) OUTPUT PLUG
AUDIO OUTPUT PLUG
MPEG INPUT PLUG
AUDIO INPUT PLUG
oPCR[0]
oPCR[1]
oPCR[2]
iPCR[0]
iPCR[1]
OUTPUT CHANNEL CH1
INPUT-OUTPUT CHANNEL CH2
INPUT-OUTPUT CHANNEL CH3
111b: BUS INTERFACE
110: DATA INPUT-OUTPUT UNIT

Fig. 8

	MPEG(I) OUTPUT	MPEG(II) OUTPUT	AUDIO OUTPUT	MPEG INPUT	AUDIO INPUT
CHANNEL	CH1				
		CH1			
		CH2			
			CH2		
			CH3		
				CH2	
					CH3
	CH1	CH2			
	CH1		CH2		
	CH1		CH3		
	CH1			CH2	
	CH1				CH3
		CH1	CH2		
		CH1	CH3		
		CH1		CH2	
		CH1			CH3
			CH2		CH3
				CH2	CH3
	CH1	CH2	CH3		
	CH1	CH2			CH3
	CH1		CH2		CH3
	CH1			CH2	CH3
		CH1	CH2		CH3
		CH1		CH2	CH3
		CH1	CH3	CH2	

Fig. 9

LOGICAL PLUG	PHYSICAL PLUG
oPCR[0]	MPEG(I) OUTPUT PLUG
oPCR[1]	MPEG(II) OUTPUT PLUG
oPCR[2]	AUDIO OUTPUT PLUG
iPCR[0]	MPEG INPUT PLUG
iPCR[1]	AUDIO INPUT PLUG

125a

CHANNEL	PHYSICAL PLUG	CHANNEL PRIORITY	PHYSICAL PLUG PRIORITY
CH1	MPEG(I) OUTPUT PLUG	0	1
CH1	MPEG(II) OUTPUT PLUG	2	2
CH2	MPEG(II) OUTPUT PLUG	1	1
CH2	AUDIO OUTPUT PLUG	2	2
CH2	MPEG INPUT PLUG	0	3
CH3	AUDIO OUTPUT PLUG	1	1
CH3	AUDIO INPUT PLUG	0	2

125b

125c

125d

Fig. 10

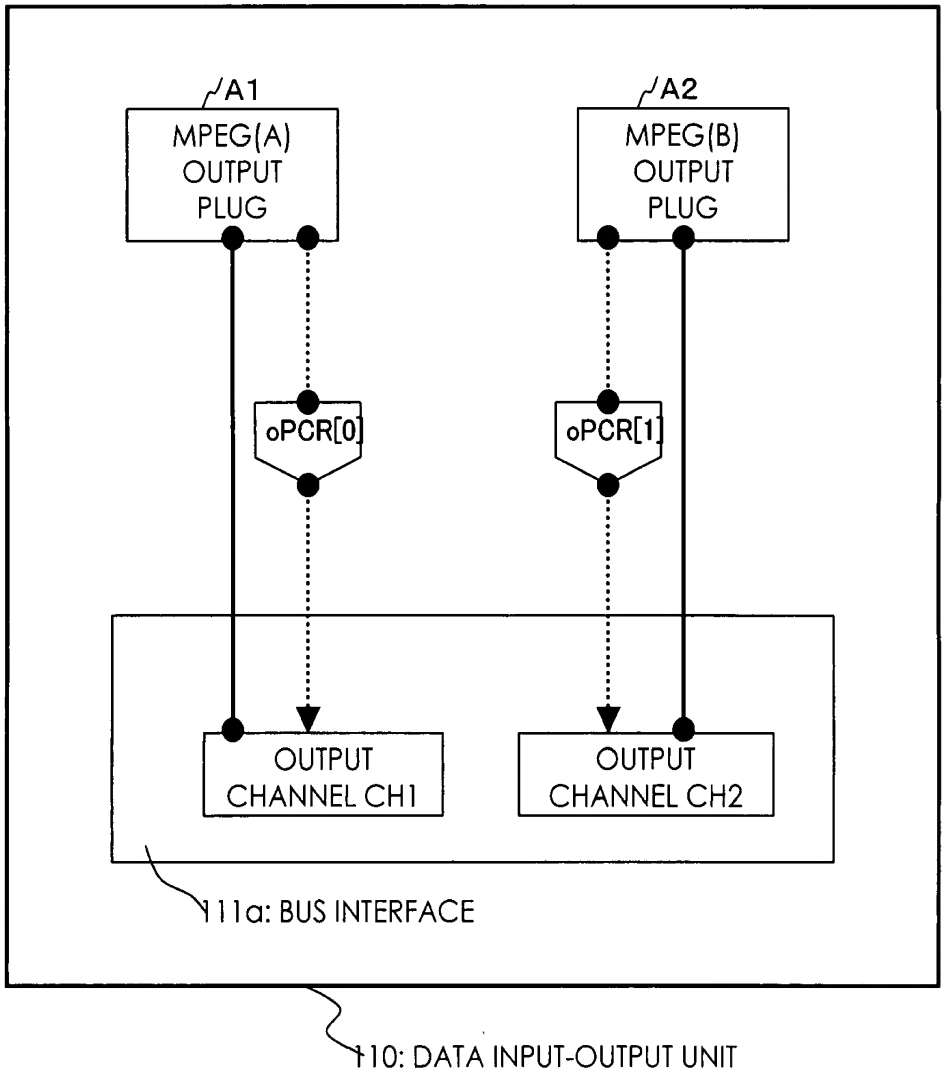

A1
MPEG(A)
OUTPUT
PLUG
A2
MPEG(B)
OUTPUT
PLUG
oPCR[0]
oPCR[1]
OUTPUT
CHANNEL CH1
OUTPUT
CHANNEL CH2
111a: BUS INTERFACE
110: DATA INPUT-OUTPUT UNIT

Fig. 11

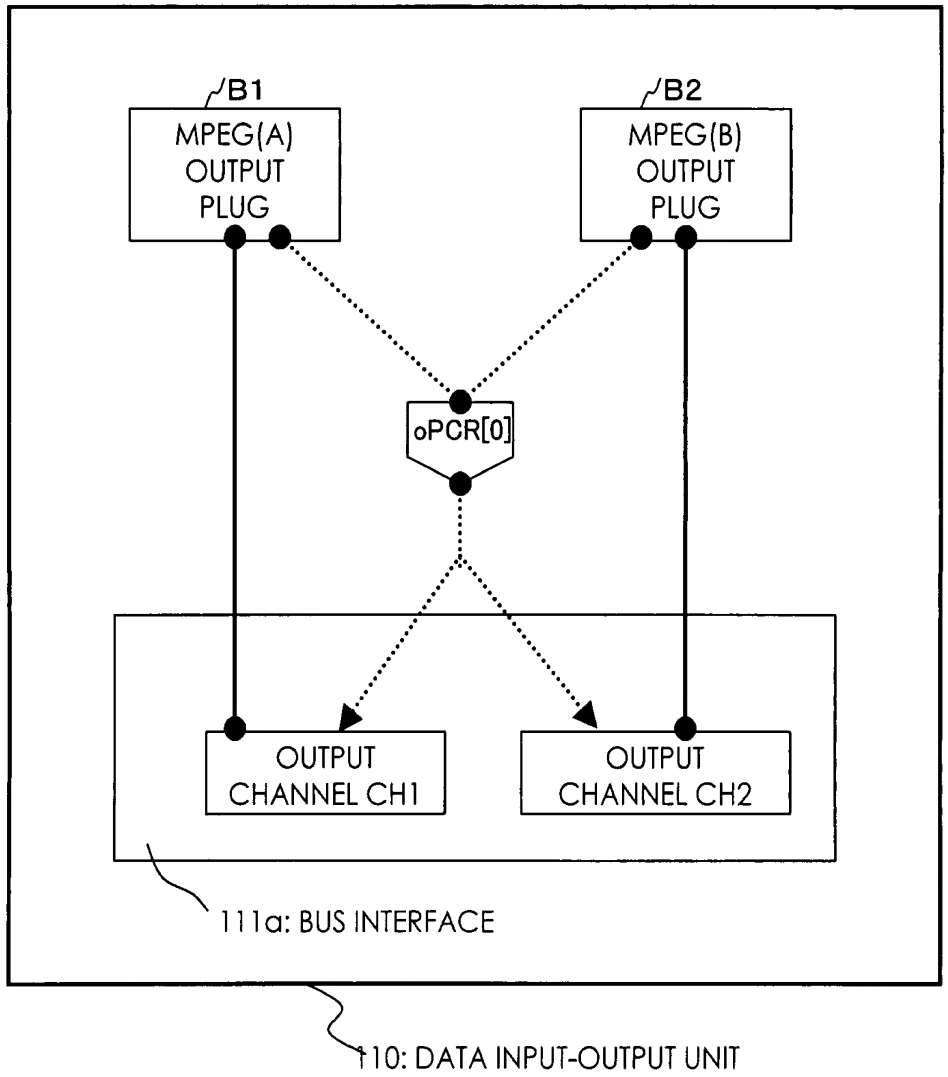

B1
MPEG(A)
OUTPUT
PLUG
B2
MPEG(B)
OUTPUT
PLUG
oPCR[0]
OUTPUT
CHANNEL CH1
OUTPUT
CHANNEL CH2
111a: BUS INTERFACE
110: DATA INPUT-OUTPUT UNIT

Fig. 12

PHYSICAL PLUG	STREAM TYPE
OUTPUT PLUG B1	MPEG(A)
OUTPUT PLUG B2	MPEG(B)

125e

LOGICAL PLUG	PHYSICAL PLUG
oPCR[0]	MPEG(A) OUTPUT PLUG

→MPEG(B) OUTPUT PLUG

125a

CHANNEL	PHYSICAL PLUG
CH1	MPEG(A) OUTPUT PLUG
CH2	MPEG(B) OUTPUT PLUG

125b

CHANNE PRIORITY
0
0

125c

PHYSICAL PLUG PRIORITY
0
0

125d

Fig. 13

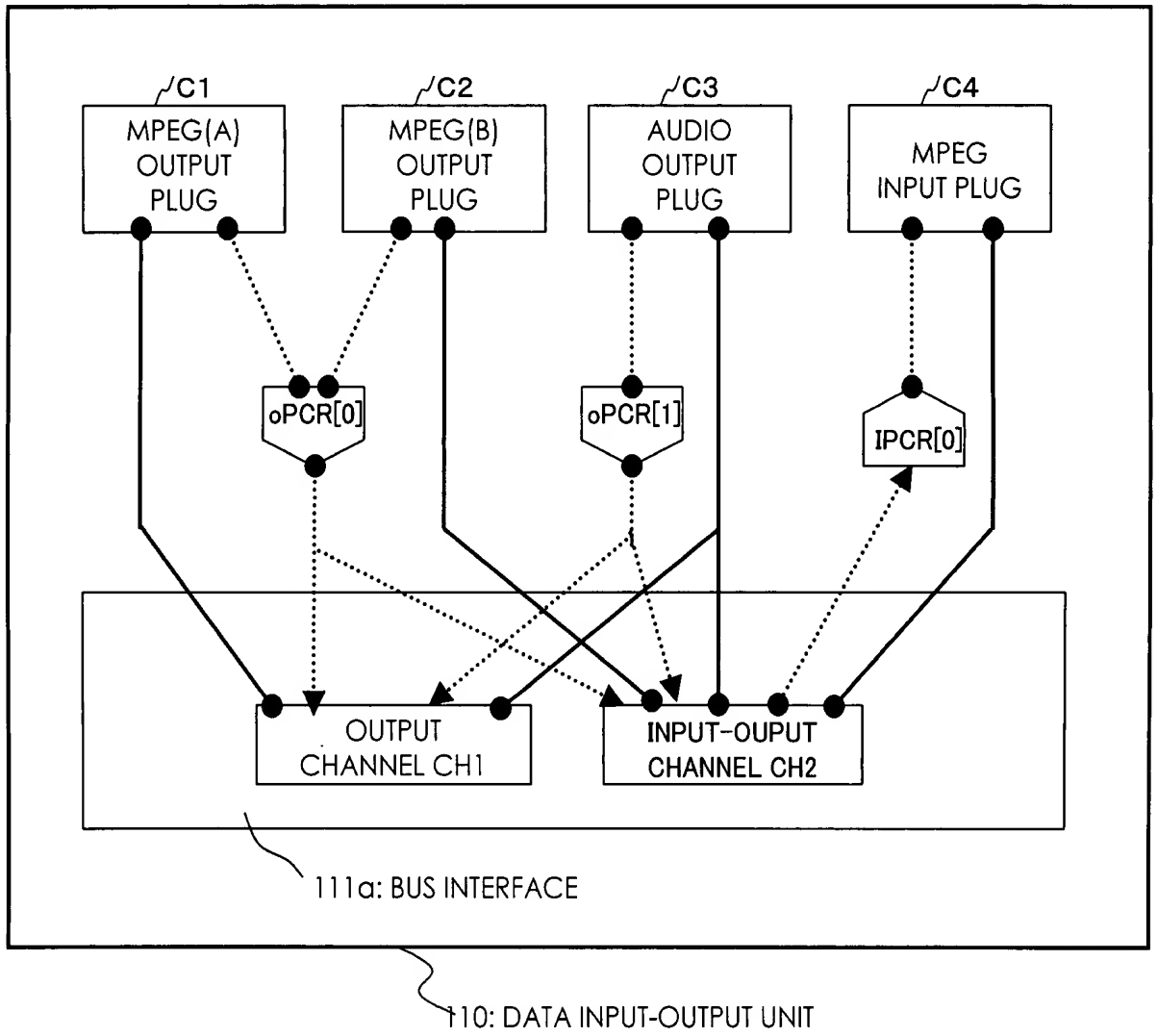

C1
MPEG(A) OUTPUT PLUG
C2
MPEG(B) OUTPUT PLUG
C3
AUDIO OUTPUT PLUG
C4
MPEG INPUT PLUG
oPCR[0]
oPCR[1]
IPCR[0]
OUTPUT CHANNEL CH1
INPUT-OUPUT CHANNEL CH2
111a: BUS INTERFACE
110: DATA INPUT-OUTPUT UNIT

Fig. 14

PHYSICAL PLUG	STREAM TYPE
OUTPUT PLUG C1	MPEG(A)
OUTPUT PLUG C2	MPEG(B)
OUTPUT PLUG C3	AUDIO
INPUT PLUG C4	MPEG

125e

LOGICAL PLUG	PHYSICAL PLUG
oPCR[0]	MPEG(A) OUTPUT PLUG
oPCR[1]	AUDIO OUTPUT PLUG
iPCR[0]	MPEG INPUT PLUG

→MPEG(B) OUTPUT PLUG

125a

CHANNEL	PHYSICAL PLUG
CH1	MPEG(A) OUTPUT PLUG
CH1	AUDIO OUTPUT PLUG
CH2	MPEG(B) OUTPUT PLUG
CH2	AUDIO OOUTPUT PLUG
CH2	MPEG INPUT PLUG

125b

CHANNEL PRIORITY
0
2
0
1
0

125c

PHYSICAL PLUG PRIORITY
1
2
2
3
1

125d

Fig. 15

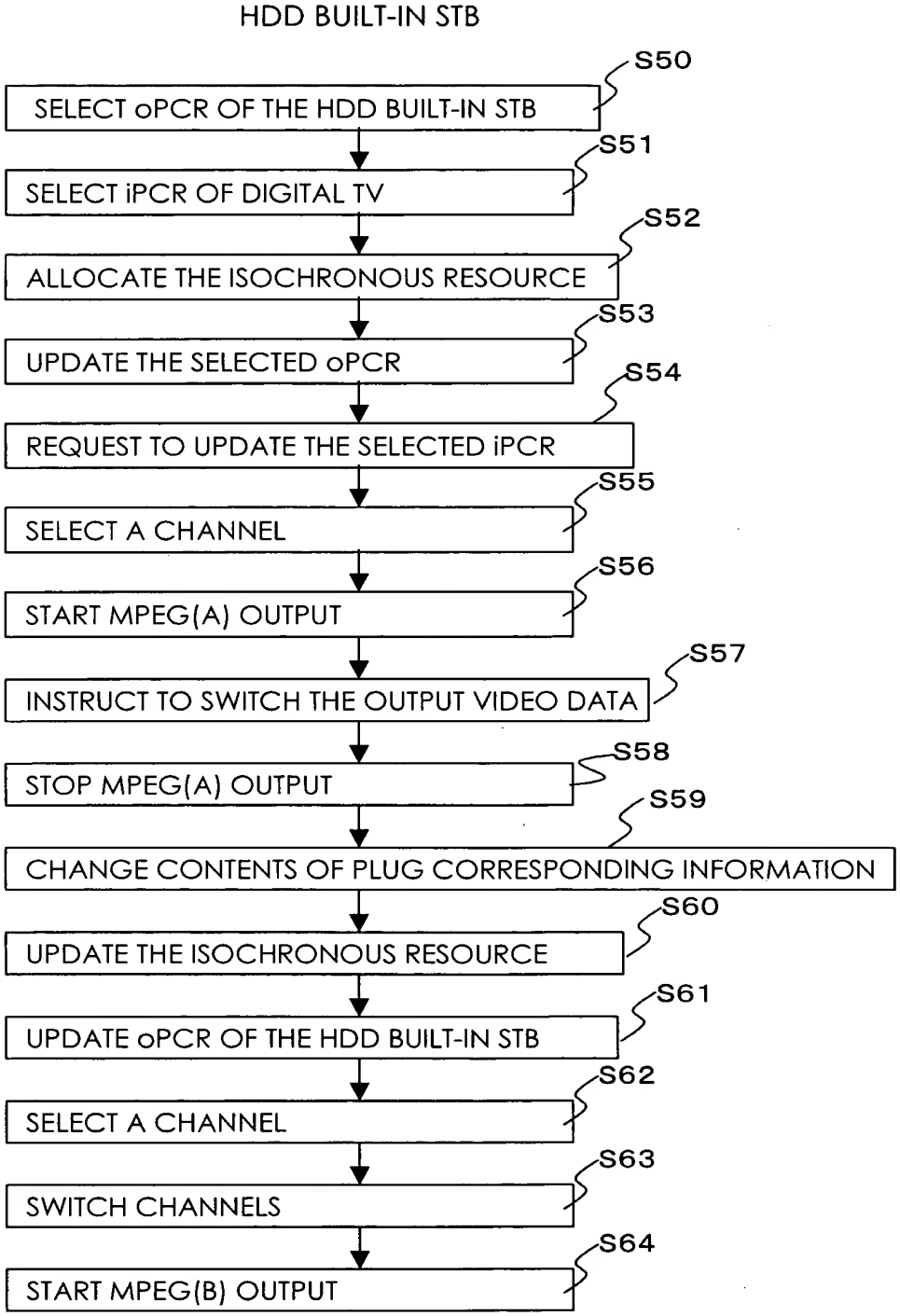

HDD BUILT-IN STB
S50
SELECT oPCR OF THE HDD BUILT-IN STB
S51
SELECT iPCR OF DIGITAL TV
S52
ALLOCATE THE ISOCHRONOUS RESOURCE
S53
UPDATE THE SELECTED oPCR
S54
REQUEST TO UPDATE THE SELECTED iPCR
S55
SELECT A CHANNEL
S56
START MPEG(A) OUTPUT
S57
INSTRUCT TO SWITCH THE OUTPUT VIDEO DATA
S58
STOP MPEG(A) OUTPUT
S59
CHANGE CONTENTS OF PLUG CORRESPONDING INFORMATION
S60
UPDATE THE ISOCHRONOUS RESOURCE
S61
UPDATE oPCR OF THE HDD BUILT-IN STB
S62
SELECT A CHANNEL
S63
SWITCH CHANNELS
S64
START MPEG(B) OUTPUT

Fig. 16

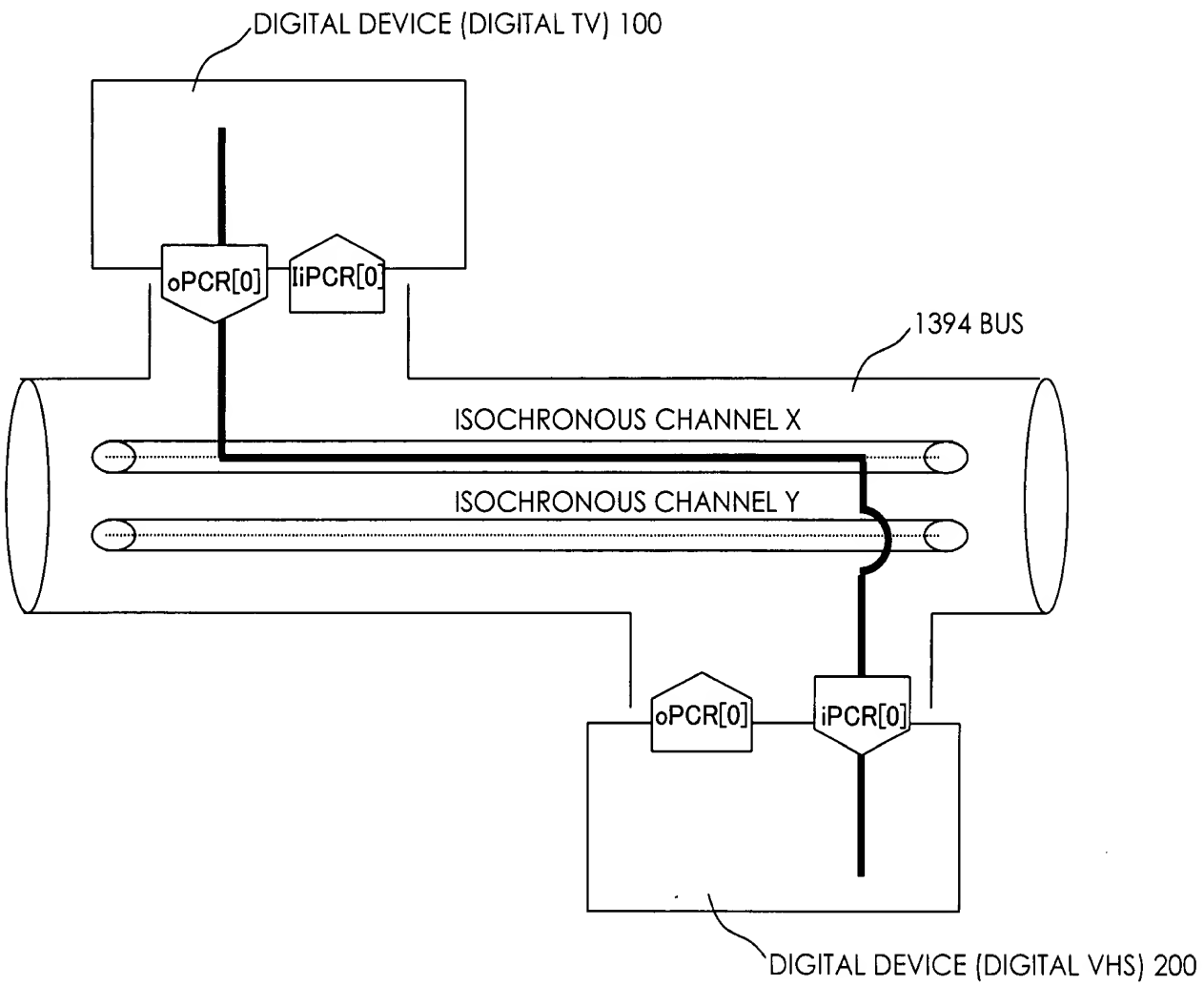

DIGITAL DEVICE (DIGITAL TV) 100
oPCR[0]
iPCR[0]
1394 BUS
ISOCHRONOUS CHANNEL X
ISOCHRONOUS CHANNEL Y
oPCR[0]
iPCR[0]
DIGITAL DEVICE (DIGITAL VHS) 200

Fig. 17

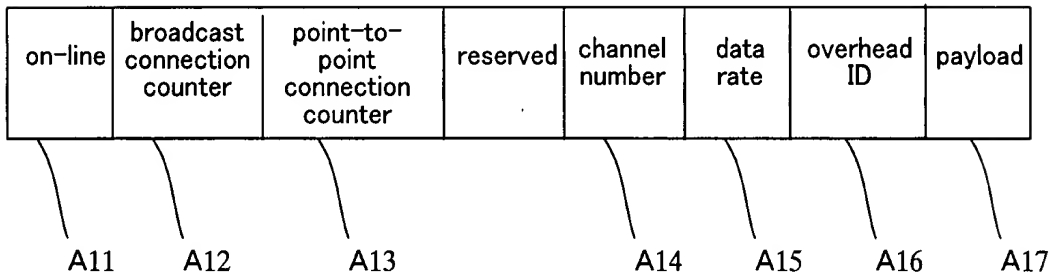

on-line
broadcast connection counter
point-to-point connection counter
reserved
channel number
data rate
overhead ID
payload
A11
A12
A13
A14
A15
A16
A17

Fig. 18

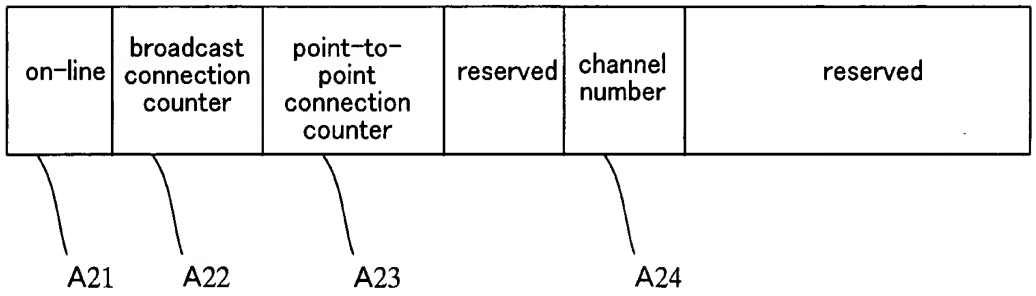

on-line
broadcast connection counter
point-to-point connection counter
reserved
channel number
reserved
A21
A22
A23
A24

Fig. 19

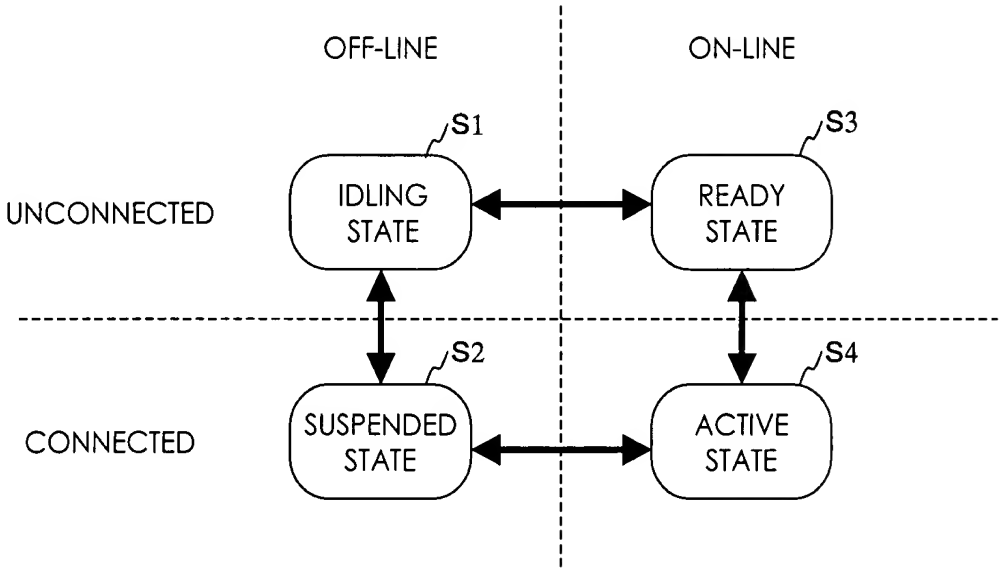

OFF-LINE
ON-LINE
S1
S3
UNCONNECTED
IDLING STATE
READY STATE
S2
S4
CONNECTED
SUSPENDED STATE
ACTIVE STATE

Fig. 20

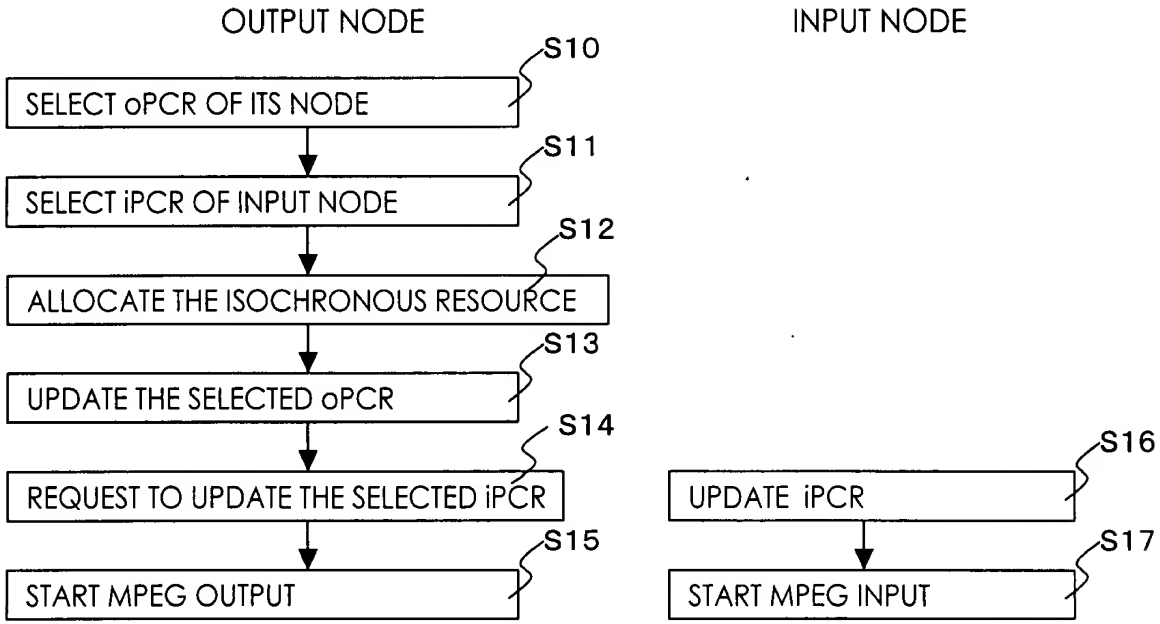
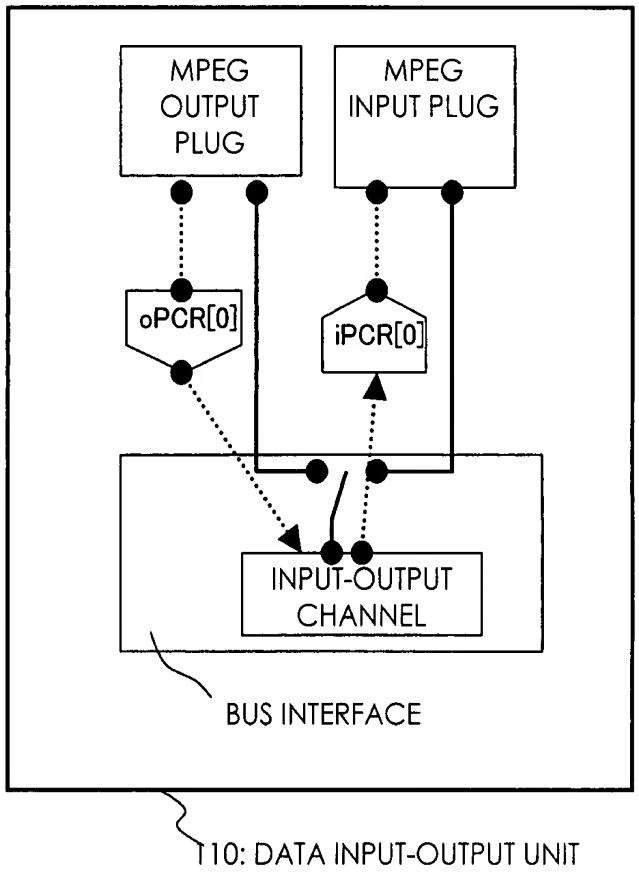

OUTPUT NODE
INPUT NODE
S10
SELECT oPCR OF ITS NODE
S11
SELECT iPCR OF INPUT NODE
S12
ALLOCATE THE ISOCHRONOUS RESOURCE
S13
UPDATE THE SELECTED oPCR
S14
REQUEST TO UPDATE THE SELECTED iPCR
S15
START MPEG OUTPUT
S16
UPDATE iPCR
S17
START MPEG INPUT

Fig. 21


MPEG OUTPUT PLUG
MPEG INPUT PLUG
oPCR[0]
iPCR[0]
INPUT-OUTPUT CHANNEL
BUS INTERFACE
110: DATA INPUT-OUTPUT UNIT

TOKYO 1825860

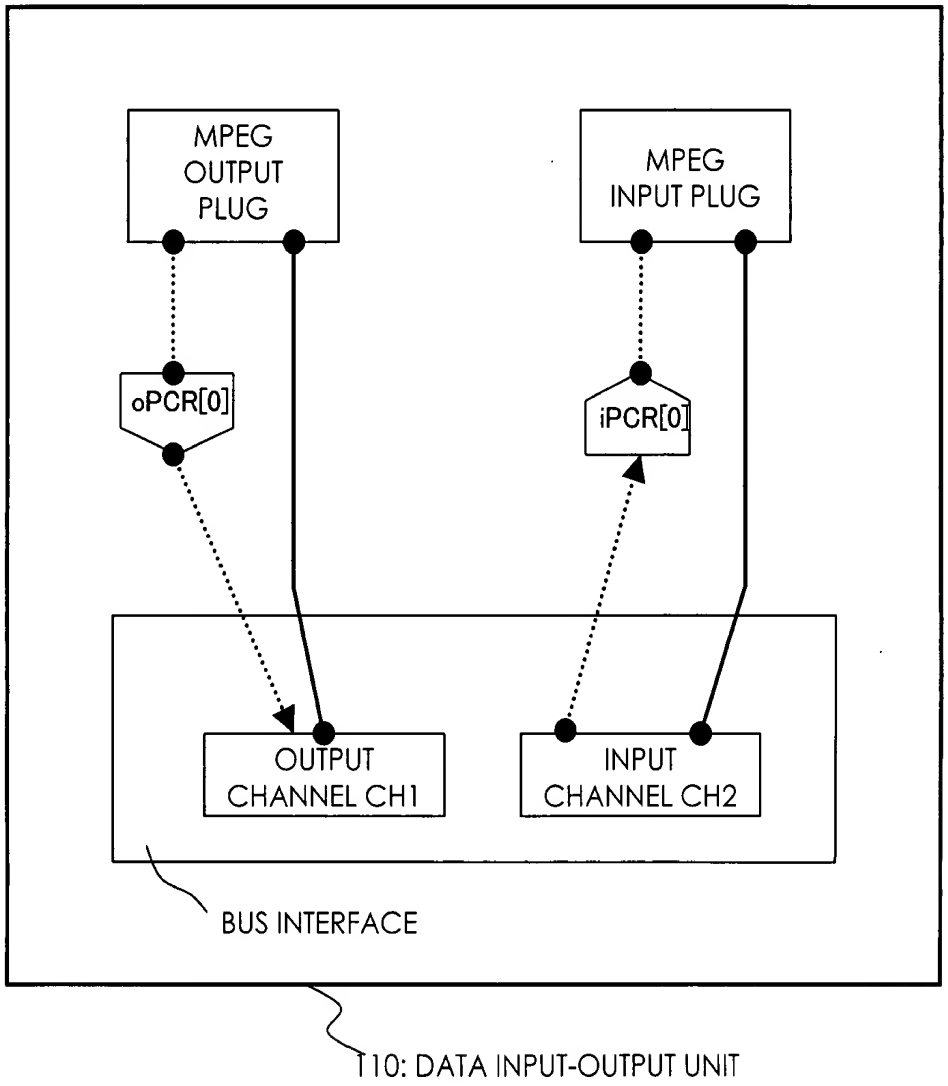



Fig.22